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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,655	06/13/2001	Shigeru Oshima	LELI 3422	5879

321 7590 08/27/2004

SENNIGER POWERS LEAVITT AND ROEDEL
ONE METROPOLITAN SQUARE
16TH FLOOR
ST LOUIS, MO 63102

EXAMINER

HENN, TIMOTHY J

ART UNIT PAPER NUMBER

2612

DATE MAILED: 08/27/2004

[Handwritten mark]

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/880,655

Applicant(s)

OSHIMA, SHIGERU

Examiner

Timothy J Henn

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 6 is/are rejected.
- 7) ☒ Claim(s) 3,4,7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3, 4, 5, 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 5 recites the limitation "the image sensor". There is insufficient antecedent basis for this limitation in the claim.

Claims 3 and 7 recites the limitation "said solenoid head". There is insufficient antecedent basis for this limitation in the claim.

Claims 4 and 8 recites the limitation "said head of the solenoid" and "the CPU".

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by the APA (applicant's admitted prior art).

[claim 1]

In regard to claim 1, note that the APA discloses a two auto-focusing system (Figure 1) for digital still cameras, which can switch the lens focusing point between two positions namely far focusing position and near focusing position comprising: an assembly base on which said two zone auto-focusing system is assembled (Figure 1, not labeled), a solenoid which switches the focusing point of the lens between two points namely far position and near position (Figure 1, Item 1; The office notes that Figure 1 discloses the use of a stepper motor to move the lens between various focusing positions while the claim requires a "solenoid". However, it is noted that the broadest definition of a solenoid is "An electric conductor wound as a helix with a small pitch". The office notes that the stepper motor of the APA inherently includes solenoid elements which are activated to move the rotor of the stepper motor thereby moving the

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lens position. Therefore, under the broadest interpretation of the claim a stepper motor meets the "solenoid" limitation), a picture taking lens which is assembled in a lens barrel as a lens assembly (Figure 1, Item 6), an axle bearing part provided on one side of said lens barrel having an axle hole (Figure 1, Item 8), a guide rail which is fixed on said assembly base and inserted into said hole of axle bearing part (Figure 1, Item 7), a coil spring placed over said guide rail to push said lens barrel assembly toward the image sensor and hold said lens barrel assembly at the home position namely far position (Figure 1, Item 12), a coupling arm provided on said lens assembly (Figure 1, Item 5), a stabilizing fork provided on said lens barrel (Figure 1, Item 9), and a stabilizing pin fixed on the assembling base and placed between the ends of said fork (Figure 1, Item 10).

[claim 2]

In regard to claim 2, note that while the lens assembly of APA is moved back and forth it would inherently be supported and stabilized by the guide rail, the axle bearing part, the stabilizing fork and the stabilizing pin to move the lens smoothly without any harmful swing (Figure 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA (applicant's admitted prior art) in view of Bittner (GB 2,259,576 A).

[claim 5]

In regard to claim 5, note that the APA discloses a two auto-focusing system (Figure 1) for digital still cameras, which can switch the lens focusing point between two positions namely far focusing position and near focusing position comprising: an assembly base on which said two zone auto-focusing system is assembled (Figure 1, not labeled), a solenoid which switches the focusing point of the lens between two points namely far position and near position (Figure 1, Item 1; The office notes that Figure 1 discloses the use of a stepper motor to move the lens between various focusing positions while the claim requires a "solenoid". However, it is noted that the broadest definition of a solenoid is "An electric conductor wound as a helix with a small pitch". The office notes that the stepper motor of the APA inherently includes solenoid elements which are activated to move the rotor of the stepper motor thereby moving the lens position. Therefore, under the broadest interpretation of the claim a stepper motor meets the "solenoid" limitation), a picture taking lens which is assembled in a lens barrel as a lens assembly (Figure 1, Item 6), an axle bearing part provided on one side of said lens barrel having an axle hole (Figure 1, Item 8), a guide rail which is fixed on said assembly base and inserted into said hole of axle bearing part (Figure 1, Item 7), a coil spring placed over said guide rail to push said lens barrel assembly toward the image sensor and hold said lens barrel assembly at the home position namely far position (Figure 1, Item 12), a coupling arm provided on said lens assembly (Figure 1, Item 5), a

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stabilizing fork provided on said lens barrel (Figure 1, Item 9), and a stabilizing pin fixed on the assembling base and placed between the ends of said fork (Figure 1, Item 10). Therefore it can be seen that the APA lacks a coil spring which pushes the lens barrel away from the image sensor to a near position.

Bittner discloses a camera which uses a spring to push a lens barrel away from an image sensitive medium to create a camera and lens cover system which results in a very compact arrangement when the cover is closed for storage (p. 9, ll. 17-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made that by configuring the spring of the APA in a manner such as that disclosed by Bittner to create a compact camera which includes a lens cover to protect the lens during storage or transport.

[claim 6]

In regard to claim 6, note that while the lens assembly of APA is moved back and forth it would inherently be supported and stabilized by the guide rail, the axle bearing part, the stabilizing fork and the stabilizing pin to move the lens smoothly without any harmful swing (Figure 1).

Allowable Subject Matter

8. Claims 3, 4, 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

[claims 3, 4, 7 and 8]

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In regard to claims 3, 4, 7 and 8 the prior art does not teach or fairly suggest a two zone auto-focus system as defined in claims 1 and 5 in which a solenoid head is connected to a coupling arm of the lens assembly to move the lens assembly when the solenoid is activated.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art further shows the current state of the art in focus control lens systems:

- | | | |
|------|-------------|--------------|
| i. | Mima et al. | US 4,910,547 |
| ii. | Sano et al. | US 4,920,420 |
| iii. | Johnson | US 4,148,574 |

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Henn whose telephone number is (703) 305-8327. The examiner can normally be reached on M-F 7:30 AM - 5:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJH
8/19/2004



TUAN HO
PRIMARY EXAMINER